DOCUMENT RESUME

ED 317 890 CG 022 402

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TITLE Psychological Effects of a Suicide Prevention Curriculum on Adolescents' Levels of Stress, Anxiety, and Hopelessness: Implications for Mental Health Professionals.
PUB DATE Apr 90
NOTE 16p.; Paper presented at the Annual Meeting of the American Educational Research Association (Boston, MA, April 16-20, 1990).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Adolescents; *Anxiety; Death; Depression (Psychology); High Schools; Program Effectiveness; Social Support Groups; *Stress Variables; *Suicide
IDENTIFIERS *Adolescent Suicide; *Hopelessness; Suicide Prevention

ABSTRACT

Suicide is currently the third leading cause of death among teenagers between the ages of 15 and 19 years in the United States. Some of the psychological variables which may be indicators of adolescent suicidal risk are a longstanding history of stress, anxiety, depression, and hopelessness. This study examined the effects of a senior high school suicide prevention unit on students' levels of stress, anxiety, and hopelessness. An experimental group (N=119) that received instruction in suicide prevention, and that demonstrated special needs, i.e., low social support, high stress, high anxiety, and/or high degrees of hopelessness, was compared with an experimental group (N=148) that did not demonstrate special needs, and with two control groups that received no instruction, one with (N=26) and one without (N=30) special needs. Results indicated that, although both experimental groups showed significant increases in factual knowledge, only the experimental group with special needs showed significant change on the psychological variables. However, when comparing the experimental group with special needs to the control group with special needs, no significant differential changes were noted. Implications for mental health professionals are considered. (Author/NB)

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Psychological Effects of a Suicide Prevention Curriculum on Adolescents' Levels of Stress, Anxiety, and Hopelessness: Implications For Mental Health Professionals

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Running head: PSYCHOLOGICAL EFFECTS OF SUICIDE PREVENTION

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Abstract

The study examined the effects of a senior high school suicide prevention unit on students' levels of stress, anxiety, and hopelessness. An experimental group that received instruction in suicide prevention, and that demonstrated special needs, i.e., low social support, high stress, high anxiety, and/or high degrees of hopelessness, was compared with an experimental group that did not demonstrate special needs, and with two control groups that received no instruction, one with and one without special needs. Results indicated that, although both experimental groups showed significant increases in factual knowledge, only the experimental group with special needs showed significant change on the psychological variables. In addition, the control group with special needs showed no significant change on the psychological variables. However, when comparing the experimental group with special needs to the control group with special needs, no significant differential changes were noted. Implications for mental health professionals are considered.

Psychological Effects of a Suicide Prevention Curriculum on Adolescents' Levels of Stress, Anxiety, and Hopelessness: Implications For Mental Health Professionals

Suicide is currently the third leading cause of death among teenagers in the United States between the ages of 15 to 19 years (Nelson, Farberow, & Litman, 1987). Some of the psychological variables which may be indicators of adolescent suicidal risk are: a) longstanding history of stress (Greenlee, 1987); b) greater anxiety (Pospiszyl, 1985); c) significantly higher depression (Griffiths, Farley, & Fraser, 1986); and d) greater degrees of hopelessness (Topol & Reznikoff, 1982). Positive correlations between depression and hopelessness have also been found for a suicidal group of adolescents (Spirito, Williams, Stark, & Hart, 1988).

The purpose of this study was to assess the impact that a senior high school suicide prevention unit had on levels of stress, anxiety, and hopelessness, particularly for those students who showed any one or a combination of: (a) low social support; (b) high stress; (c) high anxiety; and (d) high degrees of hopelessness.

Method

Subjects

The study was conducted in several senior high schools in a large urban district in California. Subjects were students in tenth-grade health classes, in which the suicide prevention unit is a standard part of the curriculum. Experimental Group subjects were those who participated in

the suicide prevention unit. All Experimental Group subjects received the same program. Control Group subjects were those who did not participate until later in the semester, after the study was completed.

For purposes of data analysis, the sample was subdivided on the basis of pretest social support, stress, anxiety, and hopelessness. Special Needs subjects were those who demonstrated any one or a combination of low social support, high stress, high anxiety, and high degrees of hopelessness. Non-Special Needs subjects were those who did not demonstrate any of these variables. Each health class had both Special Needs and Non-Special Needs subjects.

The final sample consisted of 323 subjects, divided into four groups: a) Special Needs Experimental (n=119); b) Non-Special Needs Experimental (n=148); c) Special Needs Control (n=26); and Non-Special Needs Control (n=30).

There were nearly equal numbers of males and females. Ages ranged from 14 to 18. Almost two-thirds of the subjects were age 15. Ethnicity was fairly evenly divided among Caucasian, Black, and Hispanic students, with a small percentage of Asian students.

Suicide Prevention Unit

All teachers participated in an orientation session conducted by the examiner. In addition, the examiner observed a portion of the suicide prevention unit for each

class. This helped to insure that all teachers presented the unit consistently.

Lessons one and two of the suicide prevention unit utilized two 50-minute class sessions each. Lesson one covered: a) common ideas and misconceptions about suicide; b) how to cope with depression; and c) how to help a suicidal friend. Lesson two covered: a) how to identify suicidal feelings and warning signs in others; b) how to talk to suicidal friends and get them to seek appropriate help; c) what kinds of help are available in the community; and d) the importance of getting adult help for a suicidal teen.

The film/video Suicide: The Warning Signs (Coronet Films, 1982) was shown. Lessons were augmented by class discussions and papers.

The Personal Wellness Handbook (Los Angeles Unified School District [LAUSD], 1987b) was provided. It presented: a) information and activities which paralleled lesson presentations; and b) healthy coping mechanisms for dealing with stress and depression.

The pamphlet Be a Winner: Reach Out and Show You Care (LAUSD, 1988) was also distributed. It discussed: a) suicide warning signs in self and others; b) ways to reach out and help; and c) help-related resources.

Instrumentation

Administration of test instruments was performed in the classroom setting. All instruments were self-administered. Experimental subjects received a pretest just prior to the

beginning of the suicide prevention unit, a posttest one month later after completion of the unit, and a follow-up test two months after the posttest. Control subjects received a pretest at the time that experimental subjects received the pretest, and a posttest at the time that experimental subjects received the posttest. They did not receive a follow-up test.

Pretests contained: a) the test How Much Do You Know About Suicide? (LAUSD, 1987a & Silbert, 1988); b) the Provisions of Social Relations Scale (PSR) (Turner, Frankel, & Levin, 1983, as revised by Turner, 1985); c) the Subjective Stress Scale (SSS) (Kerle & Bialek, 1958, as revised by Berkun, Bialek, Kern, & Yagi, 1962); d) the State Trait Anxiety Inventory (Form Y) (STAI) State-Anxiety Scale (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983); and e) the Hopelessness Scale (HS) (Beck, Weissman, Lester, & Trexler, 1974). Posttests and follow-up tests contained each of the instruments used in the pretest, except that the PSR was omitted.

Analysis and Results

In order to analyze the data, analysis of variance was used. The first step was to examine performance in the suicide prevention program itself. A significant interaction effect was found between group and time, $F(1,319) = 13.94$, $p < .001$. Mean scores demonstrated that both experimental groups showed an increase in knowledge from pretest to

posttest. A slight decrease in knowledge from posttest to follow-up test indicated that most, but not all, of the knowledge was retained. Control groups did not show an increase in knowledge.

The second step was to examine whether or not Special Needs Experimental subjects showed significantly lower stress, anxiety, and/or hopelessness, following participation in the suicide prevention unit. Mean scores demonstrated that levels of stress, anxiety, and hopelessness did decrease from pretest to posttest to follow-up test. Results indicated that changes on the combined variables were significant, $F(3,116) = 8.98$, $p < .001$. It was then necessary to determine on which of the three variables significant change occurred. Results indicated that significant decreases occurred in levels of stress, $F(1,118) = 9.69$, $p = .002$, and hopelessness, $F(1,118) = 18.3$, $p < .001$. However, mean levels of anxiety did not change significantly, $F(1,118) = .95$, ns.

The third step was to examine whether Special Needs Experimental subjects showed significantly greater reduction in any of the three variables, than Non-Special Needs Experimental subjects. Results demonstrated that, although the Special Needs Experimental group changed significantly on the combined variables, the Non-Special Needs Experimental group did not, $F(3,145) = 2.49$, ns. In addition, results demonstrated significant interaction effects between need and time for the variables stress, $F(1,265) = 15.09$, $p < .001$,

and hopelessness, $F(1,265) = 28.53$, $p = .001$. However, there were no significant differences between Special Needs Experimental and Non-Special Needs Experimental subjects for the variable anxiety, $F(1,265) = .11$, ns.

The final step was to examine whether Special Needs Experimental subjects showed significantly greater reduction in any of the three variables, than Special Needs Control subjects. Results demonstrated that, although as stated previously, the Special Needs Experimental group changed significantly on the combined variables, the Special Needs Control group did not, $F(3,23) = 1$, ns. However, results did not demonstrate significant interaction effects between group and time for either stress, $F(1,142) = 3.49$, ns, anxiety, $F(1,142) = .11$, ns, or hopelessness $F(1,142) = .99$, ns. Therefore, although the Special Needs Experimental group changed significantly, while the Special Needs Control group did not, the differences between Special Needs Experimental and Special Needs Control subjects was not significant. However, although not statistically significant, the pattern of data suggested possible interaction effects between group and time for the variable stress. Although levels of stress may have been affected just as greatly by current life situations, as by response to the suicide prevention unit itself, perhaps subjects were learning better ways to cope with stress.

Implications

This study suggests the need for mental health professionals to take a greater role in the design and implementation of school suicide prevention programs, in order to: (a) maximize the benefits of such programs for those students who are most in need; and (b) consider the psychological variables that suicide prevention programs might impact upon, in addition to suicide, as goals in their own right. Mental health professionals should also instruct teachers, administrators, and other school personnel in the ability to identify students in need of psychological assistance.

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Table 1

Mean Scores and Standard Deviations of Knowledge for the Special Needs and Non-Special Needs Experimental and Control Groups

	Group			
Test	Spec. Needs Exp. (n=119)	Non-Sp. Needs Exp. (n=148)	Spec. Needs Ctrl. (n=26)	Non-Sp. Needs Ctrl. (n=30)
Pretest				
Mean	13.34	14.1	13.08	14.23
S.D.	2.39	1.96	2.42	1.36
Posttest				
Mean	14.46	15.14	13.15	13.87
S.D.	2.13	1.87	2.75	2.42
Follow-up Test				
Mean	14.24	14.98		
S.D.	2.32	2.18		

Table 2

Mean Scores and Standard Deviations of Stress for the Special Needs and Non-Special Needs Experimental and Control Groups

	Group			
Test	Spec. Needs Exp. (n=119)	Non-Sp. Needs Exp. (n=148)	Spec. Needs Ctrl. (n=26)	Non-Sp. Needs Ctrl. (n=30)
Pretest				
Mean	1.7	.58	2.03	.55
S.D.	1.29	.31	1.48	.33
Posttest				
Mean	1.36	.69	2.05	.67
S.D.	1.24	.72	1.34	.6
Follow-up Test				
Mean	1.17	.71		
S.D.	1.09	.7		

Table 3

Mean Scores and Standard Deviations of Anxiety for the Special Needs and Non-Special Needs Experimental and Control Groups

	Group			
Test	Spec. Needs Exp. (n=119)	Non-Sp. Needs Exp. (n=148)	Spec. Needs Ctrl. (n=26)	Non-Sp. Needs Ctrl. (n=30)
Pretest				
Mean	45.77	33.29	51.04	32.2
S.D.	10.68	6.56	13.65	6.03
Posttest				
Mean	44.76	32.66	50.19	32.7
S.D.	13.54	9.15	9.81	6.88
Follow-up Test				
Mean	43.23	32.62		
S.D.	13.79	10.24		

Table 4

Mean Scores and Standard Deviations of Hopelessness for the Special Needs and Non-Special Needs Experimental and Control Groups

	Group			
Test	Spec. Needs Exp. (n=119)	Non-Sp. Needs Exp. (n=148)	Spec. Needs Ctrl. (n=26)	Non-Sp. Needs Ctrl. (n=30)
Pretest				
Mean	5.92	1.95	7.42	1.8
S.D.	4.79	1.8	5.91	1.94
Posttest				
Mean	4.79	1.75	6.62	2.27
S.D.	4.96	2.2	4.62	2.18
Follow-up Test				
Mean	4.4	1.84		
S.D.	4.52	2.66		